

# CROSSSECTION



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## WATERSHED INFORMATION AT YOUR FINGERTIPS

BETH LANDERS, COASTAL NPS POLLUTION EDUCATION COORDINATOR

We live in an era of near-constant availability of data. You can order a pizza online and get updates as it is made and delivered, see what your favorite celebrity is up to in 140 characters or less, or know what your friends are reading. For better or for worse, the information is out there.

In recent years, scientific information has become available to armchair environmentalists, too. You can check out wind and wave conditions, as well as recent bacterial testing results, before you ever pack up the lawn chair and the beach ball. If you are a coastal landowner, you might be concerned about weather forecasts and lake level information. Perhaps you want to contribute to the information that is out there, and are looking for a project to get involved in yourself. The links below will lead you to all sorts of information available on the web. If you don't want to type in all of the URLs, just head to our website ([www.lakecountyohio.gov/soil](http://www.lakecountyohio.gov/soil)) and follow the links.

Stay up to date on the river levels with USGS real-time water gauges. At <http://waterdata.usgs.gov/oh/nwis/rt> you can click on any one of dozens of gauge stations that report to the website. In Lake County there is a gauge on the Chagrin River at Daniels Park and one on the Grand River at the Rt. 84 bridge. They report river level (how deep it is) and discharge (how much water is going by every second). You can also subscribe to water alerts for any station. These can be sent via email or text message, hourly or daily, and you can set your own parameters. If you love canoeing, but hate scraping bottom, have the alert tell you when the river is above a certain level. Have low-lying property along the bank? Need to take Vrooman Road to work? Set an alert that tells you when the Grand is flooding. Below is a chart of river heights during the record-breaking flood in 2006.

If you enjoy boating or live along the lakeshore, you can check lake conditions here: <http://www.glerl.noaa.gov/res/glcfs/>. There are two types of products available, nowcast and forecast, which let you look at the last 48 hours and the next 48 hours. Available data includes wind and wave conditions, current directions, surface temperatures, and temperature profiles (water temperatures at different depths).

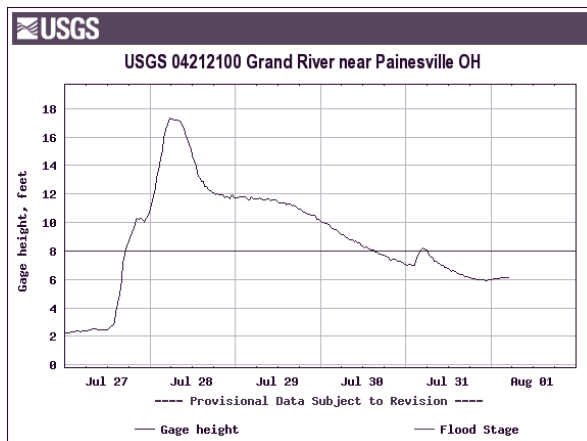
Is it safe to go in to the water? Before packing up your towels and sunscreen, you can check out water quality on many Ohio beaches through the BeachGuard program, found here: <http://publicapps.odh.ohio.gov/BeachGuardPublic/Default.aspx> on the Ohio Department of Health website. There you will find information on beach closures and advisories. The NOAA link above will also let you know about water conditions.

Checking Facebook a dozen times a day? There are several pages you can 'like' to stock your feed with useful information. First, Lake County SWCD has a page, as does the Arcola Creek Watershed. NASA's Earth Observatory posts imagery of unusual natural and human events and descriptions as they are seen from near-Earth orbit. The US National Weather Service Cleveland OH is also doing a great job of warning about upcoming weather events and providing interesting information on recent storms and other atmospheric curiosities. Many local watershed groups, outdoor hobby groups, farmers markets, and farms also have their own Facebook pages.



ANNUAL  
MEETING  
INFORMATION  
INSIDE!

LOOK FOR US IN  
THE NATURAL  
RESOURCES  
BUILDING AT THE  
LAKE COUNTY  
FAIR!



## GILSONS ESTABLISH NURSERY EASEMENT IN NORTH PERRY VILLAGE

Mark and Kristine Gilson have become the fifth family in North Perry Village to protect their farmland with an agricultural conservation easement in the Farm and Ranch Lands Protection Program (FRPP). The Klco, Gerlica, and Kroggel families entered the program in 2005 and the Browns in 2008, bringing the total of preserved locally important farmland in North Perry Village to 139 acres. As the owners of Gilson Gardens, Inc., a third generation nursery and garden center in Lake County, the Gilsens have become the first nursery business in the country to create an easement specific to the protection of nursery stock production land.



The FRPP is a voluntary federal conservation program that provides matching funds to purchase conservation easements on farm and ranch land in the United States. The FRPP was created in 1996 for the long-term conservation of agricultural lands in our country. It pays 50% of the cost of the easement for successful applicants and relies on the local government to provide a match of 25-50%. The grantors of the easement donate any remaining value. FRPP protects productive farmland from development pressures, and requires that the land remain in agriculture. Lake SWCD made the application on behalf of the Gilsens and will hold the easement. We are grateful to North Perry Village for the strong support it has given to the program since its inception by providing the match for all five easements and establishing an agricultural easement district within the Village. The preservation of our productive nursery land and farmland is important to the future of Lake County, and is a major component of our economic foundation and cultural heritage.

## ARCOLA CREEK WATERSHED NEWS

MAURINE ORNDORFF, ARCOLA CREEK WATERSHED COORDINATOR

A year and a half in, the Arcola Creek Watershed Action Plan process is on track with the goals set by the Ohio Department of Natural Resources (ODNR). A 96-page watershed inventory draft has been written and submitted for review. The inventory contains information about the physical, cultural and historical conditions of the watershed. This is an essential step in the process to highlight the problems and guide appropriate solutions.

Two groups have been meeting since January to develop technical solutions and to create an educational component for the plan. The technical work group is addressing issues such as flooding from stormwater runoff, loss of aquatic habitat, loss of wetlands, streambank erosion, pollution from nutrients and organic matter, and low flow conditions. We are currently crafting solutions to the problems, and will have a draft watershed action plan ready to submit to ODNR at the end of December 2012.

The education work group has developed a plan to improve awareness and to foster a sense of stewardship for the Arcola Creek Watershed. Look for information on the Arcola Creek Watershed at community events and in public spaces in Madison Village and Madison Township.

The planning process will help us obtain grants to implement watershed improvement projects. We partnered with Lake Metroparks last year and received funding from the National Fish and Wildlife Foundation Sustain Our Great Lakes Community Grant. This will allow us to control invasive plant species in the Arcola Creek Estuary and upstream along Dock Road. Work will commence later on this summer, and we will be contacting landowners along Dock Road to encourage their participation. We have recently submitted a grant to Ohio EPA's Ohio Environmental Education Fund (OEEF) to fund the first components of our Arcola Creek Watershed Landowner Outreach program.

Lake SWCD and Lake Metroparks held a walk at South Ridge Reservation on Saturday, June 2. John Pogacnik from Lake Metroparks provided a glimpse of what the watershed looked like prior to European settlement. The parcel is accessible by permission only, allowing nature to reclaim this area without human impacts. The Reservation hosts some giant oak trees, a healthy forest with native species, a well functioning stream that has access to its floodplain, some stream macroinvertebrates and lots of wildflowers.

The gears turn slowly at the beginning of a planning process, but once the plan is formed, we will get into the rewarding part - getting projects on the ground. Thanks to all who have helped with this process for your commitment and dedication!



John Pogacnik, Lake Metroparks shows stream organisms to Ella Donaldson and her mom.



# First Annual



## Lake County Soil and Water Conservation District Annual Meeting September 13, 2012

Join us under the big tent at Holden Arboretum for a ten-course local foods dinner celebrating the best of Northeast Ohio's farms showcased by talented local chefs.

Lake County residents are invited to guide conservation efforts in the county by voting in the special election. A ticket is not required to vote.



Lake County Soil & Water  
Conservation District



Arts & Culture  
Funding Program



Fine dining in the beautiful outdoor setting of Holden Arboretum, featuring local farm products prepared by:

**Vault Steak House**  
*Executive Chef Nicholas Kustala*

**Molinari's**  
*Executive Chef Randal Johnson*

**Handmade Hearth Breads**  
*Deidre and Alex Bevan*

**Mackenzie Creamery**  
*Jean Mackenzie and family*

**Sow Foods Catering**  
*Chef Brian Doyle*

**Joey's Italian Grille**  
*Chef Michael Schiberl*

**Lucky's Café**  
*Chef Heather Haviland*

**Bon Appetit**  
*Dan Farrell*

**Quail Hollow Resort**  
*Executive Chef Jonathan Buchner*

**Spice of Life Catering Co.**  
*Chef Ben Bebenroth*

And locally produced beverages by  
Cornerstone Brewery, Cellar Rats Brewery,  
Grand River Cellars, and St. Joseph Winery.

**Appetizers and beverages at 6 PM  
Dinner at 7 PM**

**Order your ticket today!**  
Tickets are \$50, or \$90 for a couple.

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

E-Mail \_\_\_\_\_

Number of Tickets \_\_\_\_\_ Amount Enclosed: \_\_\_\_\_

## RED MILL CREEK RESTORATION PROJECT

CHAD EDGAR, RESOURCE PROTECTION SPECIALIST

This spring, Lake SWCD and Perry High School undertook a stream restoration project on the Perry campus. The goal was to restore about 190 feet of stream bank along Red Mill Creek, reducing erosion and increasing capacity for floodwater storage. Perry High School students provided about 1900 hours of project preparation, data collection, design, and review, and then presented the proposal to the Board of Education for approval. Additional partners were Oxbow Engineering, Hallmark Excavating, and Absolute Grass, Inc. of Mentor. The Rural Areas Community Improvement Act funded this project.

Bank erosion creates a sediment problem downstream. In this restoration project, Federal Streambank Protection practices were chosen to reduce the volume of sediment moving from this site and being deposited in downstream stormwater structures.

Additionally, the project needed to protect a nearby sanitary sewer line and a water supply line. Because of the location on the school campus, this restoration provided a unique opportunity for the students to help plan the project. They were able to use old aerial photographs, engineering plans from the construction of the school, and some math skills to determine that the stream had eroded nine feet since the school was built, and eroded about six inches closer to the utility lines each year.

The students examined several erosion control techniques that would be used throughout the project. They met with Absolute Grass Inc. to look at hydroseed products. This combination of grass seed, mulch, fertilizer, tackifiers, and other ingredients is sprayed onto exposed soils after a construction project is complete. It provides ideal conditions for grass germination, and the grass roots quickly lock the soil in place. Students also identified many areas on the school property where they can gather cuttings next fall. Once these riparian plants are dormant in the fall, the students will collect them and use them for live stakes and joint plantings. Woody plant roots will further stabilize the slope.

After school was out, all of the earth-moving was completed in a one-week window in June. Hallmark Excavating created the new stream profile and moved a stormwater outfall that was narrowing the channel. Large pieces of stone were placed at the bottom, or 'toe' of the slope. These will slow down water velocity and reduce the erosive force the water has along the slope. Lake County Nursery will also provide some river birches to replace larger trees that were removed in this project.



The completed project eliminated an eroding bank, restored access to floodplain, maintained existing stormwater infrastructure, protected utility lines, and reduced sedimentation downstream.

## EQIP PROGRAMS FOR NON-TRADITIONAL AGRICULTURE

Lake County's sandy, fertile soils have successfully grown some of the best grapes, vegetables, and nursery stock in the state of Ohio. Through working with Lake SWCD, the United States Department of Agriculture Natural Resource Conservation Service (USDA NRCS) has recently expanded practices in its Environmental Quality Incentive Program (EQIP) program to assist our non-traditional local agricultural industries. The EQIP program provides financial and technical assistance with structural and management conservation practices on agricultural land. The NRCS has successfully adapted and applied practices such as Seasonal High Tunnels, Micro Irrigation, and Cover Crops to assist our vegetable and nursery growers.

**Seasonal High Tunnel:** A seasonal polyethylene covered structure that is used to cover crops to extend the growing season in an environmentally safe manner. The crops grown within the high tunnel must be planted directly into the soil covered by the house. The use of pots, growing racks or hydroponics is not eligible. Tunnels must be removed at the end of each growing season to prevent damage by snow.

**Micro Irrigation:** An irrigation system for frequent application of small quantities of water on or below the soil surface. Water is delivered as drops, tiny streams or miniature spray through emitters or applicators placed along a water delivery line.

**Cover Crop:** Living plants help improve soil and water quality by reducing soil erosion and compaction, increasing organic matter and atmospheric nitrogen, and managing soil moisture.

Each of these practices has different eligibility requirements. For Seasonal High Tunnels the area must have been farmed in the last year; for Micro Irrigation the area has to have been irrigated the last 2 out of 5 years. The local Natural Resource Conservation Service is pleased to be able to better serve the needs of Lake County producers and assist in getting conservation on the ground with these practices. Please contact the NRCS office in Orwell at 440-437-5888 Ext 3 for more information.



## WARM WINTERS AND LAKESHORE EROSION

If you have been out along the beaches of Lake County this summer, you might have noticed some changes. Or even entire beaches missing! You can blame that on the perfect combination of weather extremes we've been experiencing over the last few years. Warm winters and wet summers are a problem for lakeshore landowners.



Lake Erie's water levels were higher than average this past winter; off of Fairport Harbor, the lake was a foot higher than five years ago. This doesn't seem like much, until you consider that a vertical rise of two feet is enough to submerge most of our smaller lakeshore beaches and bring the shoreline - the point where water meets land - inland to the base of the bluffs. This condition has been in place over the last few years. In 2011, northeast Ohio experienced the wettest year on record, and all of that water had an impact on our shoreline.

Lack of ice cover on Lake Erie accelerates lakeshore erosion. In the winter of 2011-2012 there was hardly any ice development along the shoreline. Shore-bound ice protects beaches from the full power of winter storms; the ice absorbs wave energy before it has a chance to pull sand out into deeper water. If you have ever gone to the beach to view the ice dunes, you can imagine the kind of wave energy it takes to form those sculptures. This winter that ice wasn't there, so the beaches and bluffs took the full force of the winter storms.

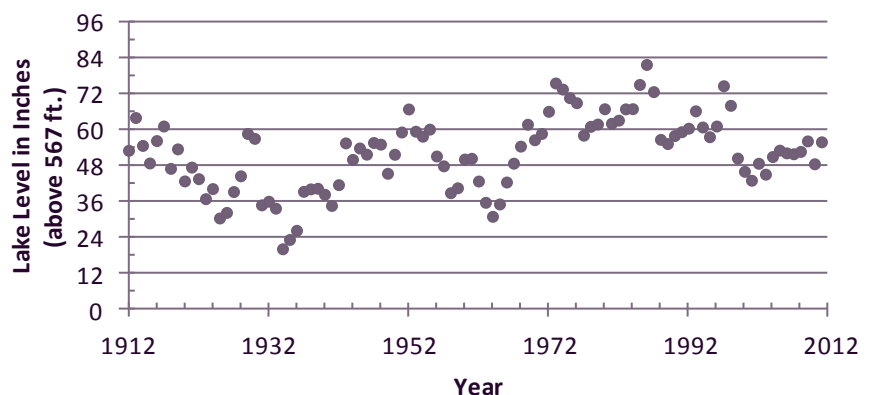
Precipitation and evaporation in the upper lakes also factors into Lake Erie's water levels. If Wisconsin and Minnesota get higher levels of rain or snow, that runoff will eventually find its way to Lake Erie. Ice cover on Lake Superior, Lake Huron and Lake Michigan also reduces winter evaporation rates from these upper lakes.

Lake Erie has no inlet control or outlet controls. Most of the water comes into Lake Erie via the Detroit River, and takes about 2.6 years to get to Buffalo and careen over Niagara Falls. About 3' of water also evaporates from the surface each year, but that is quickly replaced by precipitation flowing back into the lake via our river systems. Small amounts of water are removed by the Welland Canal, but not enough to measurably change the lake level. There are only two points on the entire Great Lakes system

where water level is managed: the outflow of Lake Superior at Soo Locks, and the outflow of Lake Ontario at the Iroquois Dam and leveling lock (several hundred feet below the surface level of Lake Erie). These structures are operated under international treaty with Canada.

As you can see, the water level on Lake Erie is determined by a complex series of natural events, and can't really be managed by us. The best we can do is to prepare for fluctuations in the lake level and plan accordingly. If you are fortunate enough to live on one of Lake County's bluffs, you should make an effort to protect or restore vegetation and reduce the amount of water that flows over the edge. There are engineered structures that can be installed to protect slopes that are already unstable. For more information on living with Lake Erie as your neighbor, contact the Lake SWCD office, or check out the Coastal Landowners page on the Residents menu on our website.

### Annual Average Lake Level 1912-2011





## WHO WANTS TO BE A CONSERVATIONIST?

Day at the Beach edition. Which of these behaviors has the stated effect on water quality?

### 1) Harmful Algal Blooms (HABs)

- |                     |                      |
|---------------------|----------------------|
| A) Goose waste      | B) Litter            |
| C) Untreated sewage | D) Fertilizer runoff |

### 2) High Bacteria Counts

- |                     |                        |
|---------------------|------------------------|
| A) Goose waste      | B) Pet waste           |
| C) Untreated sewage | D) Agricultural runoff |

### 3) 'Missing' beaches

- |                           |                             |
|---------------------------|-----------------------------|
| A) Shoreline erosion      | B) High lake levels         |
| C) Removal of bluff trees | D) Black market sand cartel |

### 4) Buried 'treasure' in the sand

- |                           |                         |
|---------------------------|-------------------------|
| A) Lazy beachgoers        | B) Water-carried litter |
| C) Overflowing trash cans | D) Wind-carried litter  |

### 5) Fun day at the beach

- |                              |                           |
|------------------------------|---------------------------|
| A) Be careful with lawn care | B) Pick up after yourself |
| C) Pick up after your pet    | D) Don't feed wildlife    |

Answers: 1) A, C, and D 2) All of them, 3) A, B, and C, 4) All of them, 5) All of them

## LAKE COUNTY SOIL & WATER CONSERVATION DISTRICT

125 E. Erie St., Painesville, OH 44077

Phone: 440-350-2730

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East End: 428-4348 ext. 2730

West End: 918-2730

1-800-899-LAKE ext 2730

Office Hours: Mon.-Fri. 7:30 am-4:00 pm

E-MAIL: [SOIL@LAKECOUNTYOHIO.GOV](mailto:SOIL@LAKECOUNTYOHIO.GOV)

WEB SITE: [WWW.LAKECOUNTYOHIO.GOV/SOIL](http://WWW.LAKECOUNTYOHIO.GOV/SOIL)

DAN DONALDSON, District Administrator	350-2030
CHAD EDGAR, Resource Protection Specialist	350-2032
BETH LANDERS, Coastal NPS Pollution Education Specialist	350-2033
MAURINE ORNDORFF, Arcola Creek Watershed Coordinator	350-5863
NRCS Field Office, Orwell	437-5888

### BOARD OF SUPERVISORS

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**SKIP DUGAN (2009), PERRY, VICE CHAIR**

**JEFF HYRNE (2010), MADISON TWP., FISCAL AGENT**

**LARRY KLCO (2012), NORTH PERRY, TREASURER**

**BRAD SHAWHAN (2012), MENTOR, SECRETARY**

### MEMBER OF:

Lake County Farm Bureau

Nursery Growers of Lake County Ohio

National Association of Conservation Districts

Ohio Federation of Soil & Water Conservation Districts

**AN EQUAL OPPORTUNITY EMPLOYER:** All Lake SWCD and USDA programs and services are available without regard to race, age, gender, national origin, political beliefs, color, religion, disability, sexual orientation, or marital or family status.

The public is invited to attend Lake SWCD's monthly Board meetings, held the third Tuesday of the month at 4:00 pm at 125 East Erie St., Painesville. Meeting announcements appear under the public agenda in the News-Herald and on the Lake SWCD website. Please call in advance to let us know you will be attending.